

REMARKS

In the outstanding Office Action, the drawings were objected to, as was the specification. Claims 1-3, 5, 7, 18, 27, and 28 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Number 5,720768 to Verboven-Nelissen. Claims 1-3, 5, 7-15, 18-24, 27, and 28 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Number 6,456,878 to Yerich et al. Claims 4, 16, 17, 25, 26, 29, and 30 were rejected under 35 U.S.C. §103(a) as being unpatentable over Yerich et al. in view of U.S. Patent Number 5,902,325 to Condie et al.

CLAIM AMENDMENTS

Claims 1, 18, and 27 have been amended to correct a typographical error. These amendments do not affect the scope of the claims.

OBJECTION REGARDING THE DRAWINGS

Figure 4 has been deleted, and Figures 5-10 have been renumbered as Figures 4-9. Therefore, it is believed that this objection has been overcome.

OBJECTION REGARDING THE SPECIFICATION

Various paragraphs have been amended to reflect the changes made in the numbering of the figures. Therefore, it is believed that this objection has been overcome.

REJECTIONS UNDER 35 U.S.C. §102

Claims 1-3, 5, 7, 18, 27, and 28 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Number 5,720768 to Verboven-Nelissen. Claims 1-3, 5, 7-15, 18-24, 27, and 28 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Number 6,456,878 to Yerich et al. Reconsideration is respectfully requested.

Claims 1, 18, and 27 are directed to a method and corresponding system that provides biventricular stimulation. According to the method, biventricular stimulation is achieved by delivering a stimulation pulse in a cross-chamber configuration between an electrode in the left ventricle and an electrode in the right ventricle, which results in synchronous capture of both ventricles. The claimed method further includes verifying capture of the left and right ventricles.

The Verboven-Nelissen patent does not teach delivering a single stimulation pulse in a cross-chamber configuration to synchronously capture both ventricles, nor does the patent teach or in any way suggest verifying capture of the ventricles following the stimulation pulse. The Examiner points to FIG. 5A which purportedly shows cross-chamber stimulation. However, the specification is clear that FIG. 5A is depicting sensing between the two leads. "Leads 152 and 153 are shown in bipolar configuration since sensing occurs between the two leads. Lines 158 represent the electromagnetic field lines between the electrodes 156 and 159 in order to illustrate this bipolar configuration." (Column 5, lines 28-32)(emphasis added). Verboven-Nelissen fails to teach or suggest delivering a stimulation pulse in a cross-chamber configuration to capture both ventricles. Furthermore, the patent fails to disclose or in any way suggest verifying capture of the ventricles. Verboven-Nelissen simply describes monitoring for intrinsic activity using a cross-chamber sensing configuration. Verboven-Nelissen does not describe, mention, or even suggest monitoring for evoked responses to verify capture. Thus, Verboven-Nelissen fails to teach both of the following: 1) delivering a cross-chamber stimulation pulse to capture both ventricles, and 2) verifying capture of the ventricles.

Likewise, Yerich et al. do not teach performing biventricular stimulation using a single pulse delivered in a cross-chamber manner. Yerich et al. teach delivering the cross-chamber stimulation pulse in step S202 "to **only** pace LV or RV" (see S202 of FIG. 5). As is clearly shown in FIG. 5, if biventricular stimulation is to be performed, then steps S204, S206, S208, and S210 are carried out rather than step S202. In step S204, a first stimulation pulse is delivered to either the right ventricle or the left ventricle, and after a V-V delay passes, a second stimulation pulse is delivered to the other

ventricle at step S210. Thus, Yerich et al. fail to teach or in any way suggest performing biventricular stimulation by means of a single, cross-chamber stimulation pulse.

Moreover, Yerich et al. do not even address capture verification. As with the Verboven-Nelissen patent, Yerich et al. only disclose looking for intrinsic activity, namely R-waves. At column 16, lines 9-25, Yerich et al. describe sensing R-waves using the trans-ventricular sensing vector. However, nowhere does Yerich et al. teach using the trans-ventricular sensing vector, or any other sensing vector for that matter, to verify capture of the right and left ventricles following stimulation pulses.

Therefore, neither reference cited by the Examiner even mentions capture verification. Instead, both references teach monitoring for intrinsic activity, and for delivering pacing pulses if intrinsic activity is not sensed within a specified period. In addition, neither reference provides a biventricular stimulation pulse that is delivered between the right and left ventricles to capture both ventricles. Verboven-Nelissen do not deliver any cross-chamber stimulation pulses, and Yerich et al. deliver a cross-chamber stimulation pulse to only capture the left ventricle.

REJECTION UNDER 35 U.S.C. §103

Claims 4, 16, 17, 25, 26, 29, and 30 were rejected under 35 U.S.C. §103(a) as being unpatentable over Yerich et al. in view of U.S. Patent Number 5,902,325 to Condie et al.

As described above, Yerich et al. fails to teach a method of biventricular stimulation that delivers a single stimulation pulse in a cross-chamber configuration to synchronously capture both ventricles. Likewise, Condie et al. fail to teach or suggest such a method. Therefore, the prior art, taken alone or in combination, fails to teach applicant's claimed invention.

CONCLUSION

In light of the above amendments and remarks, it is respectfully submitted that the application is in condition for allowance, and an early notice of allowance is requested.

Respectfully submitted,

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Date



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